

**PHOSPHATIZED AND BUSHINGLESS PISTON AND CONNECTING ROD
ASSEMBLY HAVING AN INTERNAL GALLERY AND PROFILED PISTON PIN**

ABSTRACT OF THE DISCLOSURE

The present invention relates to a connecting rod and piston pin assembly for an internal combustion engine to improve wear of the piston/connecting rod pivot point and reduce deformation of the pin bore. To this end, the assembly includes a piston having a pin bore, a connecting rod having a bore adapted to be aligned with the piston pin bore and piston pin interconnecting the piston and the connecting rod through engaging their respective bores. The connecting rod includes an internal gallery between the bore and a terminal end. The piston pin has a profiled outer circumference that is substantially circular in cross-section with a larger diameter at the distal ends than at the center portion. Either the pin or one end of the connecting rod includes a phosphatized coating having a thickness between two and eight microns to facilitate movement between the connecting rod bore and the profiled piston pin.